## Response of Sierra Pacific Resources (Nevada Power Company; Sierra Pacific Power Company)

## Energy Policy Act of 2005, Section 1234 Economic Dispatch Study

## **Questions**

1) What are the procedures now used in your region for economic dispatch? Who is performing the dispatch (a utility, an ISO or RTO, or other) and over how large an area (geographic scope, MW load, MW generation resources, number of retail customers within the dispatch area)?

Sierra Pacific Resources' operating companies, Nevada Power Company ("Nevada Power") and Sierra Pacific Power Company ("Sierra Pacific") (collectively "the Companies") currently are not directly interconnected and therefore operate separate control areas. The procedures now used for the Nevada Power and Sierra Pacific control areas for economic dispatch include monitoring actual flows for owned generation, scheduled energy, load, regulation margin, reserve requirements, must run requirements, voltage, available transmission and AGC control performance criteria, fuel availability, and changes in market and delivery alternatives, curtailments and limitations. This information is used to determine the generation requirements. Heat rates and variable O&M costs are used to determine the costs of generation and then decisions are made as to which generators should be operated and their economic loading.

Dispatch is performed at the utility level. The reliability function (transmission) issues all dispatch instructions; economic decisions and generation stacks are determined by Energy Supply.

The Nevada Power control area can be described as Southern Nevada (approximately 4,500 square miles of service territory) which in 2005 had a record peak load of 5587 MW, 1,909 MW of owned generation, 1,016 MW of long term contracts, 2,773 MW of short term contracts and served over 738,000 customers.

The Sierra Pacific control area can be described as Northern Nevada (approximately 50,000 square miles of service territory) which in 2005 had a record peak of 1,744 MW of load, 1,032 MW of internal generation, 160 MW of long term contracts, 601 MW of short term contracts and served over 343,000 customers.

2) Is the Act's definition of economic dispatch appropriate? Over what geographic scale or area should economic dispatch be practiced? Besides cost and reliability, are there any other factors or considerations that should be considered in economic dispatch, and why?

In general, Nevada Power and Sierra Pacific Power agree with the Act's definition of economic dispatch. However, it should be recognized that all costs faced by customers as a result of a dispatch decision should be included in the determination of

whether to dispatch a unit (such as start-up and shutdown costs, as well as any additional costs that may be incurred as a result of the dispatch – e.g., increased capacity payments under the terms of a contract – that are not normally considered part of energy payments).

Economic dispatch is performed independently throughout the entire WECC, as well as through other NERC regions. There is no standard or generally accepted geographic scale or area over which economic dispatch should be performed. Reliability and costs (actual, as well as opportunity), are factors to consider. In addition, there are other factors that may influence the desirability, and the costs and benefits, of economic dispatch over a particular area or region. These factors include: the costs and types of generating resources in a region or area; the location of the resources within the area (e.g., are there transmission constraints that may limit the availability of resources?); the actual or perceived benefits of expanding the dispatch area; the potential for reduced reserve margins for the larger area; and most importantly, the cost allocation arrangements for those participating in the dispatch area.

3) How do economic dispatch procedures differ for different classes of generation, including utility-owned versus non-utility generation? Do actual operational practices differ from the formal procedures required under tariff or federal or state rules, or from the economic dispatch definition above? If there is a difference, please indicate what the difference is, how often this occurs, and its impacts upon non-utility generation and upon retail electricity users. If you have specific analyses or studies that document your position, please provide them.

Nevada Power Company and Sierra Pacific Power Company have traditionally purchased from wholesale suppliers of all types. The Companies include these resources in their dispatch decisions in accordance with the applicable contract terms or through economy purchases in the spot market. The Companies adhere to all tariff requirements, State and federal rules and the Act's economic dispatch definition as discussed above.

4) What changes in economic dispatch procedures would lead to more non-utility generator dispatch? If you think that changes are needed to current economic dispatch procedures in your area to better enable economic dispatch participation by nonutility generators, please explain the changes you recommend.

As discussed, the Companies have relied on wholesale suppliers for a significant portion of their requirements. The Companies believe that current procedures are adequate and provide a fair opportunity for dispatch of non-utility generation resources.

5) If economic dispatch causes greater dispatch and use of non-utility generation, what effects might this have – on the grid, on the mix of energy and capacity available to retail customers, to energy prices and costs, to environmental emissions, or other impacts? How would this affect retail customers in particular states or nationwide? If you have specific analyses to support your position, please provide them to us.

As discussed in the response to question 2 above, there are many factors that may affect the desirability, and costs, of greater dispatch of non-utility generation or of an expanded control area. The Companies cannot comment in the abstract as the costs and benefits of particular proposals must be reviewed on a case by case basis to determine their overall effect on customers.

6) Could there be any implications for grid reliability – positive or negative – from greater use of economic dispatch? If so, how should economic dispatch be modified or enhanced to protect reliability?

Yes, but the devil is in the details. While the economic dispatch definition "the operation of generation facilities to produce energy at the lowest cost to reliably serve customers, recognizing any operational limits of generation and transmission facilities" is intended to produce neutral results with respect to reliability, there are many circumstances where improperly designed economic dispatch regimes could produce negative effects on reliability (e.g., there have been numerous proposals that have failed to consider the location of generation reserves and the ability to deliver such resources to particular loads, thus potentially diminishing reliability).